

REMARKS

This is in response to the Office Action mailed April 14, 2003. In the Office Action, all claims 1-15 were rejected. With this Amendment, claim 2 is amended and the remaining claims are unchanged in the application.

Section 1 of the Office Action indicated two minor objections to the Specification and suggested appropriate correction. Applicant has complied with these suggested corrections and respectfully submits that the objections to the disclosure may now be withdrawn.

Section 3 of the Office Action indicated that claim 2 was rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim a subject matter which applicant regards as the invention.

Specifically, section 3 of the Office Action indicated that claim 2 recited the limitation "the combustion chamber" and that there was insufficient antecedent basis for that limitation in claim 2. Applicant has amended claim 2 to recite "the combustion furnace" which enjoys antecedent basis in independent claim 1. Accordingly, applicant respectfully submits that the rejection of claim 2 under 35 U.S.C. section 112, second paragraph, may now be withdrawn.

Section 5 of the Office Action indicated that independent claims 1 and 12, among others, were rejected under 35 U.S.C. section 103(a) as being unpatentable over Itoh (US Patent 4,401,763) in view of Parth (US Patent 3,784,359). Applicant respectfully traverses this rejection in view of the following.

As set forth in applicant's specification on page 4, beginning at line 6, it is noted that in general combustion techniques are performed in batch mode. In such a system, a pre-selected amount of a sample is conveyed to the combustion chamber to ensure that the thermal mass and resulting gas and steam do

not overly stress the system. However, traditional batch-processing introduces a temporal lag that can adversely affect real-time control of water processing. An important aspect of the embodiments of the present invention is the provision of a continuous real-time carbon analyzer for water applications. The continuous nature of carbon analysis provides a substantially reduced analytical lag time that is much more appropriate for real-time process control. Applicant respectfully notes that both independent claims 1 and 12 are drawn specifically to the continuous nature of embodiments of the present invention. Specifically, independent claim 1 recites, among other things, a sample inlet to receive a continuous stream of sample specimen, as well as a combustion furnace that is coupled to the sample stream flow controller . . . to receive continuous flow of sample stream, and finally a detector . . . to receive a continuous flow of carbon dioxide and provide an output indicative of the relative amount of carbon dioxide flowing therethrough. With respect to independent claim 12, that claim recites continuously receiving a sample specimen and measuring a quantity of carbon dioxide entering by the combustion furnace.

Applicant has reviewed the individual teachings of Itoh and Parth and respectfully submits that even if such teachings could be combined, that the hypothetical combination fails to teach or suggest the subject matter of independent claims 1 and 12 because both such references simply disclose batch processing of the type known in the prior art.

With respect to the Itoh reference, each and every example or discussion of sample introduction into the system of Itoh uses either a syringe (generally in the case of liquid samples) or a boat. See column 4, lines 40-43; column 5, lines 51-57; column 7, lines 35-56; column 8, lines 57-62; column 9, lines 53-57; column 10, lines 36-41; column 11, lines 23-29; and column 12, lines 7-16.

With respect to the Parth reference, batch mode processing is indicated by the use of syringe 90 as disclosed in column 2, lines 24-29.

Since both Itoh and Parth teach batch-mode processing and do not teach or suggest continuous on-line carbon measurement, applicant respectfully submits that the independent claims 1 and 12 are allowable over the teachings of Itoh and Parth, taken alone or in combination. Further, applicant respectfully submits that dependent claims 2-11 and 13-15 are allowable as well by virtue of their dependency, either directly or indirectly, from allowable independent claims.

In conclusion, applicant respectfully submits that the entire application is now in condition for allowance. Reconsideration and favorable action are respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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